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ABSTRACT

The use of up-to-date labor market information (LMI) provided by a variety of state, federal, and local agencies and organizations can help program planners and policy makers design effective career and technical education (CTE) programs to prepare students for occupations and careers in demand. LMI includes information about labor market conditions, employment trends, earnings in occupations, skill requirements, and education and training resources that offers insights about economic trends that have implications for employment. CTE program planners can use such LMI to ensure that they accomplish the following: develop occupational standards that reflect changing socioeconomic demands; ensure that CTE programs contain current and relevant workplace information; and facilitate individual career decision making. Four ways that program planners can use LMI to coordinate services, be cost effective, meet quality requirements, and show evidence of success are as follows: link academic and occupational skills standards to career development; use multiple sources of LMI; refer students to high-quality information resources; and link career information with assessment tools. (A bibliography listing 4 publications and 8 Word Wide Web sites constitutes approximately 20% of this document.) (MO)

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by Bettina Lankard Brown
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Connecting CTE to Labor Market Information

High-quality career and technical education (CTE) programs prepare students for occupations and careers in demand. CTE program planning involves careful use of up-to-date labor market information (LMI), which is provided by a variety of state, federal, and local agencies and organizations. This Brief reviews why and how the use of LMI can help program planners and policy makers design effective CTE programs.

Why Use LMI

Labor market information (also called work force or career information) includes information about labor market conditions, employment trends, earnings in occupations, skill requirements, and education and training resources (Sommers 2000). It offers insights about economic trends that have implications for employment, such as "globalization of trade, changes in workplace and organizational culture, changes in marketing and customer requirements, regulations that affect health and safety, finance, and environmental issues; and increasing levels of technology and telecommunications" (Fretwell, Lewis, and Deij 2001, p. 17). CTE program planners can use such labor market information to ensure that they accomplish the following:

Develop Occupational Standards that Reflect Changing Socioeconomic Demands

LMI allows for in-depth analyses of occupations and occupational standards by providing data that reflect the needs of the workplace and the wider economy (Mansfield 2000). It can help educators and policy makers identify occupations that are in high demand, have changing job requirements and needs, employ a large percentage of the work force, and reflect new and emerging fields of work (Fretwell et al. 2001). Information on the labor force can also pinpoint changes in the attitudinal patterns of workers; technological, communication, and work organization patterns; lifestyle patterns; and work patterns, which have implications for standards development. Demographic changes in the worker population, as illustrated in labor market or work force information, may also affect how occupational standards are developed and validated. Changes in the work force, e.g., increasing numbers of older, female, and minority workers, have implications for how educators help their clients prepare for and succeed in the workplace.

Ensure that CTE Programs Contain Current and Relevant Workplace Information

Secondary, postsecondary, and adult students need up-to-date, relevant information to make informed decisions about their education, career paths, and future job choices while they are in school and throughout their lives. LMI indicates the numbers of available jobs within given occupations, the speed with which employment in specific occupations is growing and/or is expected to grow, anticipated job openings, education and training requirements, working conditions, earnings, and where jobs are located (Ohio Department of Education 2001).

CTE practitioners and policy makers need similar data to ensure that their programs, curricula, and allocation of resources are appropriately designed and targeted. LMI sources provide international and national economic trends, national enterprise employment data, sector surveys, census and social security data, medium-term employment forecasts, employment service job bank data, employer advisory committees, and occupational employment surveys and long-term forecasting (Fretwell et al. 2001).

Facilitate Individual Career Decision Making

Well-organized labor market information provides a basis from which students can assess their potential for work in certain jobs and analyze which training opportunities are best suited for them. Program planners and policy makers must be cognizant of both the "supply side" (workers) and the "demand side" (employers) of the labor market so that programs and services can be coordinated, addressing the needs of the workers and employers in the community by answering the following types of questions (AFL-CIO 2001):

Supply side (workers)
- What are the demographic characteristics of the work force?
- Which populations are having trouble finding or keeping jobs that pay enough to support them or their families?
- What wages are required to live in their community?
- How are workers geographically distributed across the region?

Demand side (employers)
- What are the major industries in the area and what is their growth potential?
- What are the current and projected labor needs of businesses in the area?
- What are the hiring standards, wage structures, and skill requirements?

How CTE Program Planners Can Use LMI

Uses of labor market information must lead to the coordination of services, be cost effective, meet quality requirements, and show evidence of success. Four ways program planners can do this are as follows.

Link Academic and Occupational Skills Standards to Career Development

One way for CTE practitioners to achieve such linkage is by using the guidelines and standards developed by the National Career Development Association and the Association of Computer-based Systems of Career Information (Sommers 2000). These resources provide relevant and accurate information that educators can use in developing education linkages with business and industry. The V-TECS system for linking academic content standards to occupational standards provides another valuable resource for CTE program planners. It identifies the "academic skills required for competent workplace performance and provides tools for enhancing the quality of workplace and academic performance" (Losh 2000, p. 9; Snyder 2000).

Use Multiple Sources of Labor Market Information

Resources that presents work force information for occupational clusters may be found in New York's *CareerZone system* <http://nycareerzone.org/>, in curriculum materials such as Oregon's Certificates of Advanced Mastery <http://www.ode.state.or.us/opte/CAM/index.htm>, and through practices that have been identified by America's Labor Market Information System <http://www.lmi-net.org/best_practices/index.htm>. Other sources of labor market information include the following (AFL-CIO 2001, p. 3):

- Census Bureau for data on population and business activity
- Bureau of Labor Statistics for information on the labor force, jobs, and wages
- Bureau of Economic Analysis for information on national income, gross domestic product, and industry wealth data
- State and local government agencies that use these federal data to produce custom reports and often conduct their own LMI surveys
- Private data sources, particularly for information on specific firms

Refer Students to High-Quality Information Resources

Educators have traditionally used print-based resources such as the *Dictionary of Occupational Titles* (DOT) to bring career information to the classroom. The *Career Guide to Industries* (Bureau of Labor Statistics 2000), for example, offers information on 42 industries that are most represented in the work force. For each industry, information is presented about the nature of the industry, working conditions, employment, occupations in the industry, training requirements, advancement opportunities, earnings, and outlook.

The Occupational Information Network (O*NET), which was developed to replace the DOT, "is a flexible, skills-based system that describes job requirements and worker attributes as well as the content and context of work" (Mariani 2001, p. 26). It provides a comprehensive system of occupational descriptions that answer the need for job information and allows for the efficient gathering and updating of information. The domains of the O*NET model are as follows (Peterson et al. 2001):

1. Worker characteristics (abilities, work styles, occupational values and interests)
2. Worker requirements (required knowledge, skills, and education)
3. Occupational requirements (generalized work activity, work context, and organizational context)
4. Experience requirements (useful for matching people and occupations)
5. Occupational characteristics (labor demand descriptors and project occupational employment, labor supply descriptors, and so forth)
6. Occupation-specific requirements (skills, knowledge, tasks, duties, machines, tools, equipment)

Online labor market information is gaining in popularity. due to an "increase in the number of computer-assisted career guidance systems, the widespread availability and use of the Internet and a growing number of adults interested in further education and career information".(Imel, Kerka, and Wonacott 2001, p. 2). SkillsScan Online: Have Skills, Will Travel is a web-based program that involves clients in a skills identification process to help them "identify their core strengths, skills sets, and areas needing development...It is a self-directed process that enables clients or employees to assess skills and competencies, explore career options that match their skill sets and plan skill development activities to keep pace with changing work demands" (Beckhusen 2001, p. 19). Some of the limitations of online programs, however, must be considered, depending upon the audience for which LMI is being provided. For example, clients who do not have access to the Internet, who lack computer proficiency, or who are not prepared to make career decisions through self-assessment would not be candidates for these programs.

Link Career Information with Assessment Tools

Career information is often linked with assessment tools, such as interest inventories, that help students focus on the information most pertinent to them (Sommers 2000, p. 1). O*NET has a set of self-directed assessment tools to help clients with their career preparation, decision making, and transitions to the workplace (Mariani 2001). However, as is true for users of online LMI, the insights they provide and their successful use depends to a great degree on the user's proficiency with the tools, his/her readiness for career decision making, and the appropriateness of the instrument (Imel, Kerka, and Wonacott 2001).

CTE program planners and policy makers need LMI to develop and enhance their programs and policies for an ever-changing work population. There are many ways in which this information can be used as an efficient and appropriate strategy for today's workers. Improvements in work force information databases have been made through the development of the Occupational Information Network. Sommers (2000) identifies the following areas as being critical to the improvement of work force information systems: "strengthening local data; improving data quality, consistency, and timeliness; filling key data gaps; improving analysis and information delivery; and obtaining customer feedback" (p. 2).

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